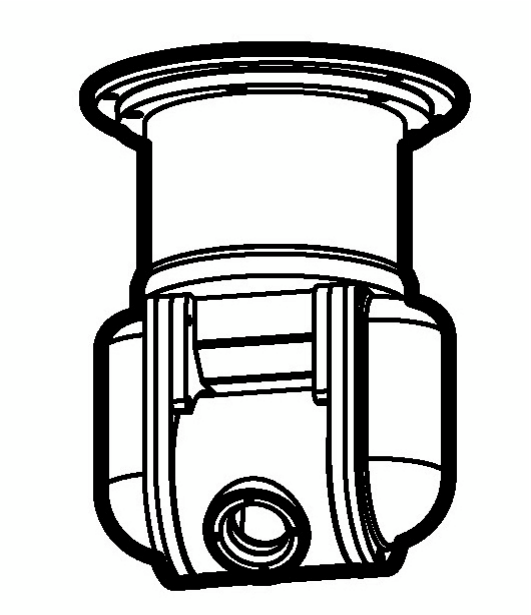
Ex Mark: **II 2 GD Ex d IIC T6 Gb, Ta : -15°C to +60°C**
Ex t IIIC T80°C Db
Certificate: Nemko 11ATEX1022

Veilux User Manual SVEX-Q18 Intelligence Camera Set



Safety Instruction

Please carefully read the Manual Book before your operation

1. Installation

„ Please install under required environment

„ Ensure stable and reliable mounting in case camera be damaged

„ Ensure supply power same as nameplate marked before equipment being powered

„ Do not open the pan/tilt and enclosure under humid atmosphere, otherwise video picture will be influenced because of enclosure good sealing, humidity could not go outside.

„ Please connect cable correctly

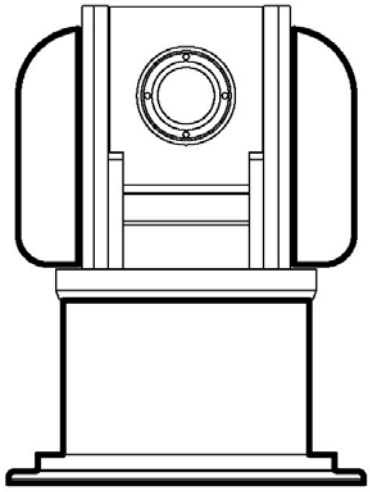
„ The product is for ceiling mounting only.

2. Maintenance

„ Please shut off before maintenance and repair

„ Pay attention to the flameproof joint while disassembly and assembly

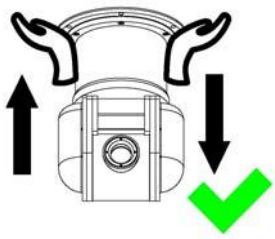
Important Notice



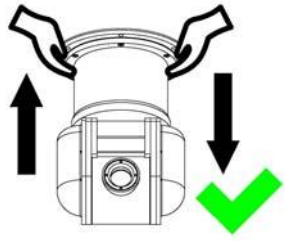
Most Suitable Position for Movement

Choose the most suitable position when moving the equipment.

Important Notice



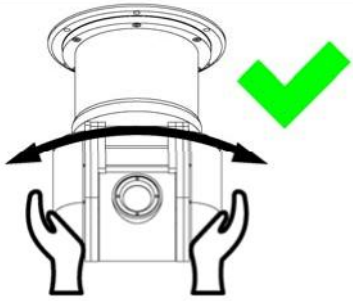
Move the camera like this

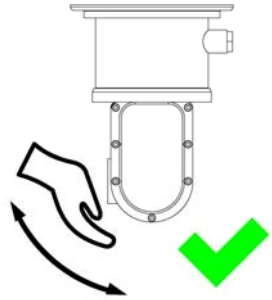


Move the camera like this

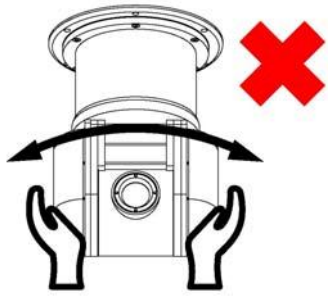
No hammar

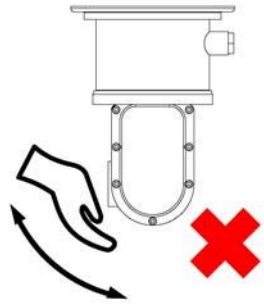
The camera can be rotated when power off



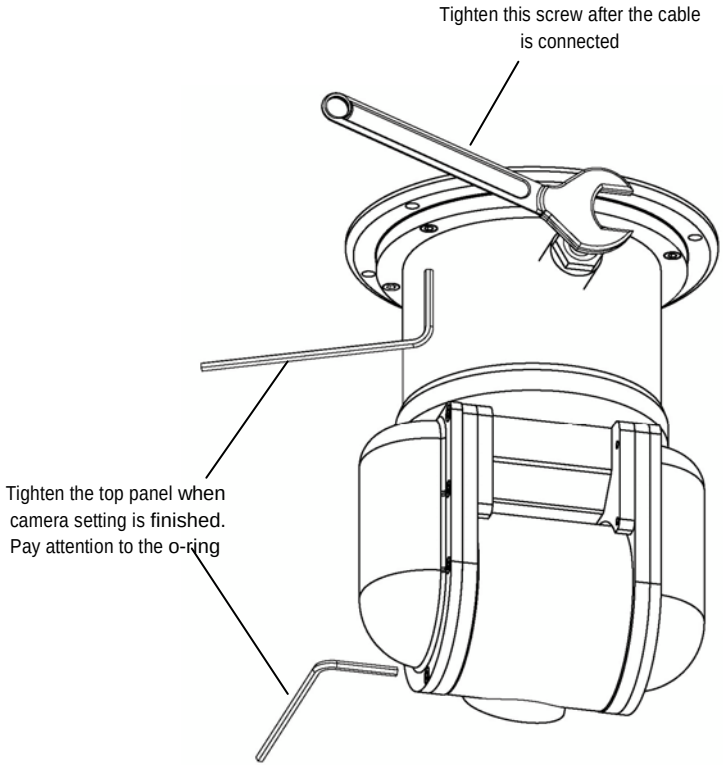


Do not turn the camera when power on





Important Notice


Tighten this screw after the cable is connected
Tighten the top panel when camera setting is finished. Pay attention to the o-ring

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1. **BRIEF**

This **SVEXQ18 EXPLOSIONPROOF PAN TILT CAMERA**（therefore as SVEX-Q18）as a new monitoring equipment adopts advanced production techniques and matured quality management system to make its quality, performance and appearance a leading position in explosion proof monitoring products. It can be used in flammable and explosive environment to realize monitoring purpose.

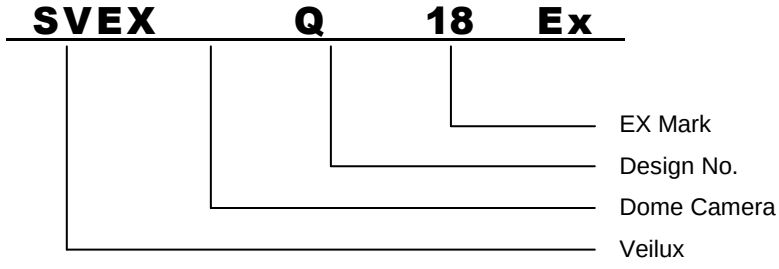
Strictly according to European Directive EC/94/9 and EN 60079-0: 2009, EN 60079-1: 2007, EN60079-31: 2009**,** Standards of GB3836.1-2000 GB3836.1—2000 Electrical apparatus for explosive atmosphere: General requirements, GB3836.2-2000 Electrical apparatus for explosive atmosphere: Flameproof'd' and GB12476.1-2000 Electrical apparatus for explosive dust: Using enclosure and limiting surface temperature for protecting electrical apparatus Chapter 1: Technical requirements, this camera owns advantage of small volume, light weight and easy installation features and could be used in petroleum, chemical industry, jetty, port, mine, space, army and foodstuff area.

YHQ18 with high performance color integrated camera, 23X optical lens, 10X digital zoom could adjust pan tilt speed according to lens location to keep a clear quality image. It owns low lux technique and color B/W auto change, digital picture up/down and freeze function.

YHQ18 with multiple protocols to respond different control directives, its body moves 360° pan turning Continuously and tilt -90°~-+30°, with 64 presets to work in any complicated atmosphere.

2. **TECHNICAL**

2.1 Type Code



2.2 Certificate

Ex Mark	Ex II 2 GD Ex d IIC T6 Gb, Ta : -15°C to +60°C Ex t IIIC T80°C Db

Ex Certificate	Nemko 11ATEX1022

2.3 Electric Data

Input voltage	110~240VAC, 50/60Hz
Working current	≤500mA
Power consumption	＜50W
Communication	RS-485
Communication speed	multiple, could be set
Communication protocol	multiple, could be set
Address code	256
Preset position	128
Preset Accuracy	≤0.1°
Electric connection	6-core cable for control, Power and video

2.4 Camera Data

Brand	HITACHI
Type	VK-S858EN
Mode	PAL
Scan	Line scan
CCD	1/4〞SONY CCD
Line Scan	15.625KHz
Site scan	50Hz
Pixel	470,000/795(H) x 596(V)
Lens	High performance /23X optic zoom / auto focus / F1.6, f=3.6～82.8mm
	10X digital zoom total 230X
Min focus	0.01m（tele）/ 1.0m（far）
View angle	54°（wide）/ 2.5°（far）
Signal process	No. 6 DSP
Low Lux	0.1Lux（color）/ 0.02Lux（black）
TVL	480（color）/ 600（black/white）
SNR	> 50dB

Video output	BNC joint / 1.0±0.2Vp-p / 75Ω

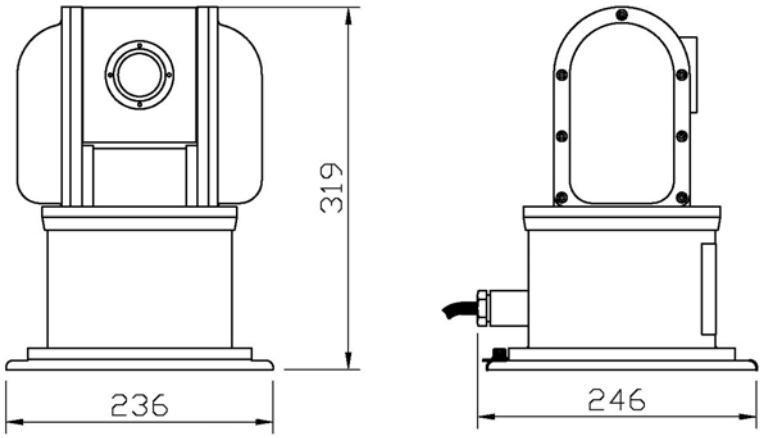
2.5 Mechanical

Material	Stainless 304
IP level	IP67
Pan	0~360° continuously
Tilt	-90°~-+30°
Pan speed	0.1°/S ~60°/S
Tilt speed	0.1°/S ~60°/S
Unit/ Ship weight	22Kg / 25Kg
Mounting	ceiling

2.6 Environmental

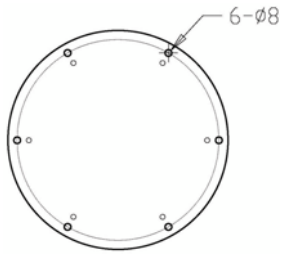
Air pressure	86～106KPa
Environment temperature	-15℃~+50℃
Relative humidity	U95%RH (+25℃)

2.7 Dimension



P1. SVEX-Q18 out dimension

2.8 Mounting Size



P2. Camera bottom fix hole on diameter 216mm round

3. INSTALLATION

3.1 Caution

Please carefully check before installation

a. If there is ex-marking license

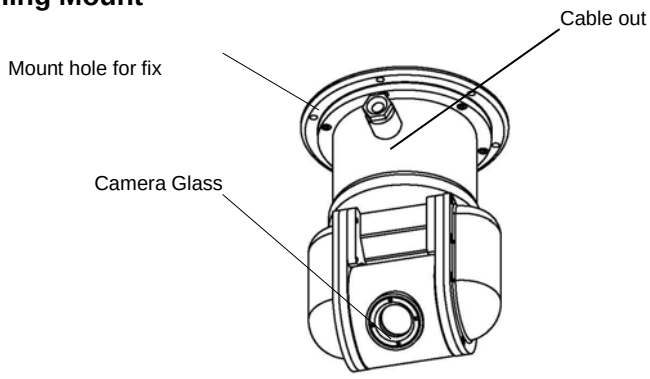
b. The ex-marking satisfy environment use

c. All ex-proof and flameproof parts are complete enough for structure

d. Inside and outside earthlings are ready

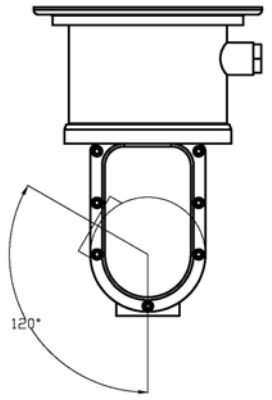
Stop immediately while there is any unconformity

3.2 Ceiling Mount



P3. Ceiling mount

Please refer to chapter 4.2 for the setting of SVEX-Q18 before installation. For the bottom fix hole installation, please refer to P2.

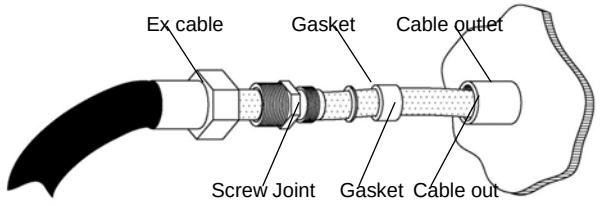


P4. Tilt rotation angle

3.3 Cable Working

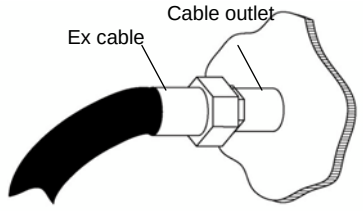
3.3.1 Ex Cable Use

a. As P6, open the tighten screw on the base of camera, open ex cable screw joint for future use.



P5.

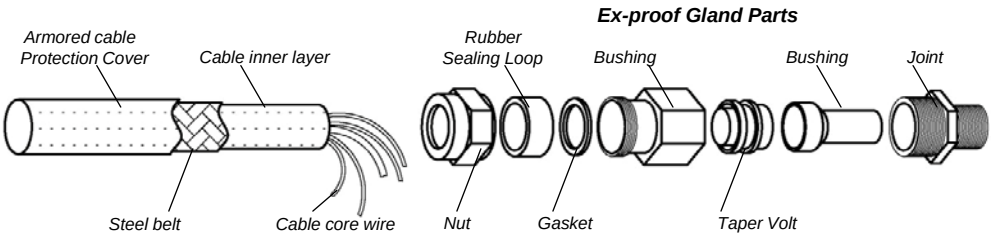
b. As P6 firstly tight screw joint and then tight ex cable



P6.

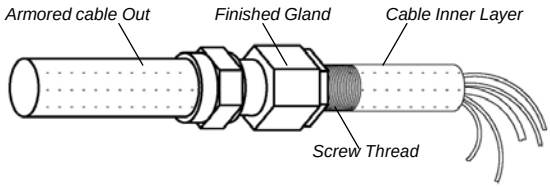
3.3.2 Armored Cable Use

a. as Picture 8, remove proper length cable protection cover and cut off not used part.



P7.

b. as Picture 8, install Ex-proof Gland to Armored Cable



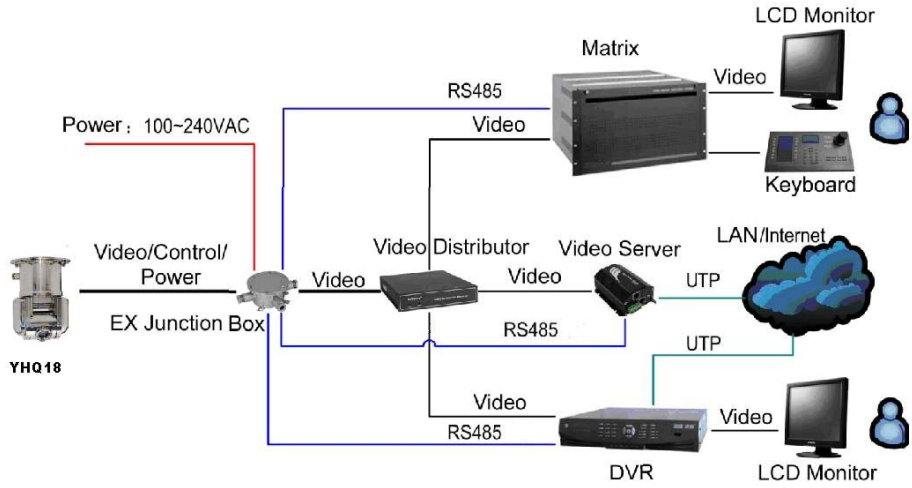
P8.

c. armored cable with ex gland could be connected with any ex equipment's.

4. CONNECTION, SETTING & APPLICATION

4.1 System Diagram

4.1.1 Connecting Diagram



P9

Video signals can be connected with different equipment, such as LCD monitors, DVRs, video server or matrix. The signals can be also distributed or gained by video distributors as well.

All equipment's can control the camera with suitable communication way and protocols. Code adapter (protocol converter) is used for some matrix and RS232-RS485 converter is necessary for some DVR system.

4.1.2 Cable Definition

While camera leaves factory, we supply a Composite Cable* with camera, the cable goes out from Camera bottom with length at least 2 meters. So while connection the system, just connect the cable with Junction Box. (*Composite Cable: A special cable, one Composite Cable includes one group power, one group control and one group video, it is generally used in Industry CCTV system.)

Table 1: Cable Definition

Composite Cable			
Name	**Power**	**Control（shielded）**	**Video**

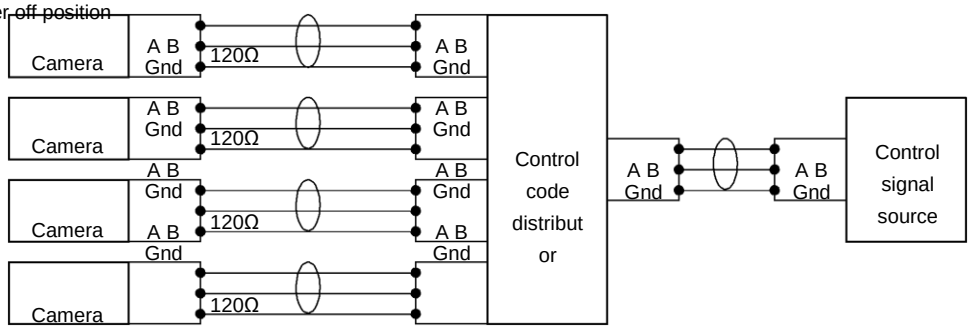
Function	Live wire	Neutral wire	Earth wire	RS485-A	RS485-B	*Standard Video Cable*
Color	*Brown*	*Grey*	*Yellow/Green*	*Red*	*Blue*	

4.1.3 Power and Video Cable Connection

A junction box shall be used with SVEX-Q18 as Picture, and refer to Table 1 to connect cable of power and video inside Junction Box. Remember to use ex cable for power cable out of Junction Box.

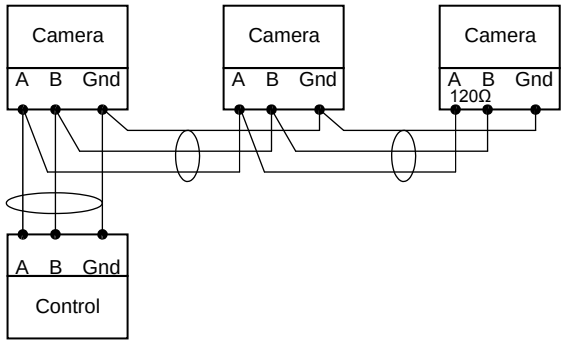
4.1.4 Control Signal Connection

While connecting Control Source and Cameras as below, please use Control Code Distributor. Besides adding a 12Ohm Terminal Resistor between Terminal A and B (as T6 Communication Board, Jumper JMP2 under off position



P10. Star Connection

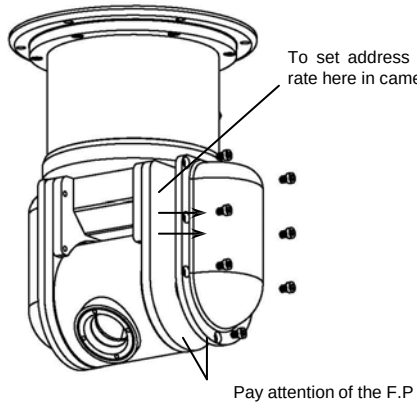
While connecting Control Source and Camera as below, please just add one 12Ohm Terminal Resistor between Terminal A and B(JMP2 on). And pay attention that the distance between junction box and camera shall not beyond 7mters



P11. "Chrysanthemum" Connection

4.2 Setting

4.2.1 Set Method

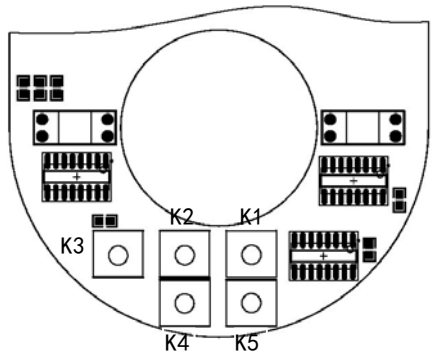


P12. Set Method

After opening the left side panel, the dip switch can be seen. The customer needs to set the protocol, address and baud rate. See the below chapter for reference.

When power is on, the camera version, protocol, baud rate and address of current camera are shown.

VERSION：1.0
PROTOCOL：PELCO-P
BAUD：4800
CAMERA ID：001



P13. Setting board

4.2.2 Camera Address Set

Decimal system is used for camera address, K1、K2、K3 dip switches are for address setting. K1 stands for the unit digit, K2 is for tens digit and K3 for hundreds digit. Other K4 is for baud rate and K5 for control protocol.

e.g if the camera address is No.2, the K1 needs be 1 and K2, K3 should be 0, see below table:

Dip Switch	K3	K2	K1
Address	0	0	2

If the camera address is No.138, the K1 needs be 8, K2 is 3 and K3 should be 1, see below table:

Dip Switch	K3	K2	K1
Address	1	3	8

4.2.3 Communication Protocol Set

Check the protocols in the control system and then set K5 as below table. The new setting will work after power on again.

Table 2: Protocol setting (K5)

Dip Switch	Protocol
1	PELCO-P
2	PELCO-D

4.2.4 Baud Rate Setting

Set baud rate with K4 as below table. The new setting will work after power on again.

Table 3: Protocol setting (K4)

Dip Switch	Baud Rate
0	Remote Control
1	1200
2	2400
3	4800
4	9600
5	19200

4.2.5 Remote Control Setting

When K4 is “0”, camera address, control protocol and baud rate can be set with OSD Menu (the default baud rate is shown on the display when power is on). At this time, the setting of K1, K2, K3 and K5 won’t work. Setting process is as below: Go to preset 95, press MAIN MENU → CONTROL → RS485.

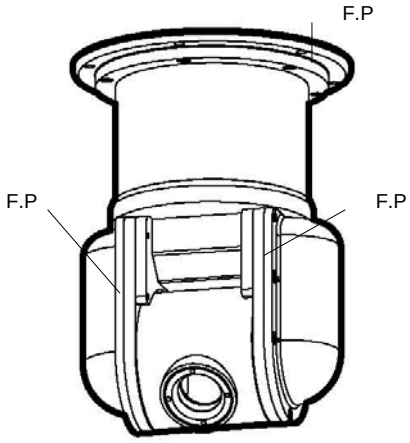
5. OSD MENU FUNCTION

OSD MENU is available for this camera. You can enter OSD like this: when camera power is on, go to No.95 preset and the main menu will be shown. Then the “UP”, ”DOWN”, ”LEFT”, ”RIGHT”, “IRIS OPEN” and ”CLOSE” in the control part will turn into the menu control key, the other keys of control part will not work. When :<>” is shown, it means there is a slave menu. “UP” and ”DOWN” can choose the menu; while ”LEFT” and “RIGHT” can change the specification. “OPEN” means OK and it can go into the slave menu as well. When the menu item is used, it will glitter.

When system is in scan mode, “RETURN: CLOSE” will be shown in the lower left corner of display. You can quit with “IRIS CLOSE” and then control the camera.

6. FLAMEPROOF STRUCTURE

- Completely consider the explosive air getting into ex-proof structure, which may lead to explosion because of some reason and to confirm and ensure camera explosion proof performance based on its structure gap, length and max temperature it will get to.
- Enclosure shall burden water pressure testing for 1.5Mpa for 10~12 seconds without leakage as pass, which is ordered in GB3836.2-2000.
- Camera surface temperature max shall not over 80℃ while it is working.
- Window glass adopts steel glass to burden Impact and Heat change testing.
- Enclosure protection to IP67
- Cable for Camera uses inlaid device to tighten its screw and nut and make cable tight and no move.



P14. Flameproof point location

7. **TROUBLE SHOOTING**

Table 4. Trouble shooting

Problems	**Reason**	**Method**
No image	Power off	Make sure the power is ok
	Video cable not good connection	Check the Video Cable
Sometime no image	Video cable not good connection	Check the Video Cable
Control error	Not good connection of Signal cable	Check Signal Cable is correct connection
	Too long communication distance make signal loose	Add repeaters to make communication distance longer
	Signal reflect	Short connect the farthest camera decoder board'120 and add 120Ω resistance to remove reflect
	Not correct Address	To re-set refer to Manual book
	Not correct Protocol	
	Not correct Baud rate	

8. **SHIPPING AND STORGE**

After package, without rain or snow fall directly to product, shipment could do by air or sea and store for one year under the environment of 0℃~+40℃, humidity >90%

9. QUALITY GUARANTEE

For any camera produced by Veilux, we promise half-year to change and one year to repair. During Guarantee period, we supply free service except following situations:

- User does not operate as manual book requires
- User un-install the whole product by themselves
- Lightning or Act of God

If there are additional agreements between Veilux and buyer, then agreements shall be strictly done

10. COMPANY COMITTMENT

- Veilux owns the final design changing and final specification rights and no responsibility to inform user
- This manual book belongs to Veilux rights, without permits or any book inform, any company or private copy of whole or part of the book shall be prohibited.

802 GREENVIEW DR STE 200

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